

PATENT APPLICATION CS-7853 LeA 35,958

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF) CDOUD NO : 1645
CHRISTIAN AICHINGER ET AL) GROUP NO.: 1645)
SERIAL NUMBER: 10/621,866) }
FILED: JULY 17, 2003) }
TITLE: METHODS FOR IDENTIFYING INHIBITORS OF THE 20S AND 26S PROTEASOME)))

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. 1.97(b)

Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Sir:

This disclosure statement under 37 CFR 1.97 & 1.98 is submitted before the first Office Action in order that the Patent and Trademark Office may consider the relevancy of certain information to the invention described and claimed in the subject application, and in compliance with the regulations concerning information disclosure statements. Enclosed are copies of the following:

- a) the documents and any corresponding English language equivalents listed on the attached Form PTO 1449, and
- b) the Search Report received in the corresponding application pending in the European Patent Office.

I hereby certify that this correspondence is being deposited with the United State
Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450, on
Date
Raymond J. Harmuth, Reg. No. 33,896
Name of applicant, assigner or Registered Representative
Kan 1 100
/ Signature
January 7, 2004
Date

This Information Disclosure Statement should not be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, that any reference mentioned herein constitutes prior art, or that the references listed, severally or in any combination with one another or with any other information, are believed to render any claim in the subject application prima facie unpatentable.

Respectfully submitted,

By

Raymond J. Harmuth Attorney for Applicants

Reg. No. 33,896

Bayer CropScience LP 100 Bayer Road Pittsburgh, Pennsylvania 15205-9741 (412) 777-3916 FACSIMILE PHONE NUMBER: (412) 777-3902 lo/HARMUTH/rjh085

Sheet 1 of 7

Atty. Docket No. CS-7853 / LeA 35,958 -Eorm PTO 1449 U.S. Department f Comm rce Serial No. Patent and Trademark Offic ፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፠ 10.621,866 LIST OF PRIOR ART CITED BY APPLICANT Applicant (Use Sev ral Sheets If Necessary) Christian Aichinger et al Filing Date Group July 17, 2003 1645 U.S. PATENT DOCUMENTS EXAMINATE TRADE NITTAL EXAMINER FILING DATE DOCUMENT NUMBER DATE NAME IF APPRO-**CLASS SUBCLASS** PRIATE (Bel. to corresp. to EP 345,750) AA 5,425,942 06/20/95 . Tanaka 424 94.1 (Bel. to corresp. to WO 95/24914) 12/02/97 ΑB 5,693,617 <u>Stein et al</u> 514 18 (Bel. to corresp. to WO 00/23614) 09/02/03 23 AC 6,613,541 B1 Vaddi et al 435 ΑD ΑE ΑF AG AΗ ΑI ΑJ ΑK **FOREIGN PATENT DOCUMENTS** DOCUMENT NUMBER DATE **CLASS SUBCLASS** TRANSLATION COUNTRY Yes No* (Bel. to corresp. to WO 91/13904) AL 2,077,665 09/06/91 Canada (Bel. to corresp. to WO 00/43000) 07/18/01 AM 2 359 561 Canada 5-292964 11/09/93 AN Japan (Abstract Attached) ΑO 6-22759 02/01/94 Japan (Abstract Attached) X 10/01/98 ΑP 98/42829 World OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.) Science, Vol. 268, 5 May 1995, pgs. 726-731, "Inhibition of Proteasome Activities and Subunit-AR Specific Amino-Terminal Threonine Modification by Lactacystin" by G. Fenteany et al. Nature, 386, April 3, 1997, pgs. 463-471, "Structure of 20S proteasome from yeast at 2.4 Å AS resolution" by M. Groll et al. Journal of Biomolecular Screening, Volume 4, Number 2, (month unavailable) 1999, pgs. 67-73, "A Simple Statistical Parameter for Use in Evaluation and Validation of High Throughput Screening AT Assays" by Ji-Hu Zhang et al.

Neither English Language Equivalent nor an English Language Translation is available.

not considered. Include copy of this form with next communication to applicant.

EXAMINER Initial if references considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and

DATE CONSIDERED

EXAMINER

		Sheet 2 of 7
Form RFO 1349 U.S. Department of Commerce Patent and Trademark Offic	Atty. Docket No.	Serial No.
Rev. 7-80 Patent and Trademark Offic	CS-7853 / LeA 35,958	10.621,866
LI気で PRIOR ART CITED BY APPLICANT	Applicant	
n n mile Stude Several Sheets If N cessary)	Christian Aichinger t al	
JAN 0 9 2004 Suse Several Sneets if N Cessary)	Filing Dat	Group
<u> </u>	July 17, 2003	1645

&/		U.S. PATEN	F DOCUMENTS			
	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPRO- PRIATE
AA						
AB						
AC						
AD						
AE						ļ
AF						
AG						
АН						
AI						
AJ			- Ga			
AK						
	AB AC AD AE AF AG AH AI AJ	AA AB AC AD AE AF AG AH AI AJ AK	AA AB AC AD AE AF AG AH AI AJ AK	AA AB AC AD AE AF AG AH AI AJ	AA	AA AB AB AC AD AE AG AH AI AI AJ AK

	·	1	FUNEI	AN PAIENT DOCUMENTS		·	r		
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SS SUBCLASS	TRANSLATION		
L							Yes	No⁴	
	AL	00/33654	06/15/00	World					
	AM							ļ	
	AN							ļ	
	AO								
	AD					1			

	OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)
	Chem. Biol. 5, (month unavailable) 1998, pgs. 307-320, "Substrate binding and sequence
AR	preference of the proteasome revealed by active-site-directed affinity probes" by M. Bogyo et al.
	Annu. Rev. Biochem., 65, (month unavailable) 1996, pgs. 801-847, "Structure And Functions
AS	Of The 20S and 26S Proteasomes" by O. Coux et al.
	J. Biol. Chem., 273 (15), April 10, 1998, pgs. 8820-8828, "Enzymes Catalyzing Ubiquitination and
AT	Proteolytic Processing of the p105 Precursor of Nuclear Factor KB1" by O. Coux et al.
EXAMINER	DATE CONSIDERED

EXAMINER Initial if references considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.

Neither English Language Equivalent nor an English Language Translation is available.

(Form 27) Rev. 7-80	1449	L F	J.S. Department of Co Patent and Trademark RIOR ART CITED BY A everal Sheets If N co	Offic	:e ANT		Atty. Docket No. CS-7853 / LeA 35,9	58	Sh et 3 Serial No. 10.621,866	3 of <u>7</u>	
0 9 2004	SHS1	Use S	everal Sheets If N ce	RPPLICA SSARY)	AN I		Applicant Christian Aichinger	et al			
1 9 700.	` انځ	•					Filing Date July 17, 2003		Group 1645		-
	8				U.S.	PATENT	DOCUMENTS		10-10		
TREDGE MA	VER AL		DOCUMENT NUMB	BER		TE	NAME	CLASS	SUBCLASS	IF AP	DATE PRO- ATE
		AA									
		АВ							<u></u>		
		AC									
		AD					· · · · · · · · · · · · · · · · · · ·			-	
		AE									
		AF								-	
		AG									_
		AH								-	
	+	Al								<u> </u>	··
-		AJ									
		AK			REIG	N PATE	NT DOCUMENTS	<u> </u>			
		DOC	UMENT NUMBER	DA ⁻	TE		COUNTRY	CLASS	SUBCLASS	TRANSL	ATION No*
	AL										
	AM										
	AN										
<u>-</u>	40								ļ		
,	AP									•	

J. Biol. Chem., 265, March 25, 1990, pgs. 4789-4792, "The Proteasome (Multicatalytic Protease)

AR Is a Component of the 1500-kDa Proteolytic Complex Which Degrades Ubiquitin-conjugated Proteins" by J. Driscoll et al.

Proc. Natl. Acad. Sci. USA, Vol. 96, pgs. 10403-10408, August 1999, "Epoxomicin, a potent and selective proteasome inhibitor, exhibits in vivo antiinflammatory activity" by L. Meng et al.

Bioscene, 26 (3), (month unavailable) 2000, pgs. 9-13, "Modeling Antimicrobial Activity of CloroxTM Using an Agar-Diffusion Test: A New Twist on an Old Experiment" by J. K. Mitchell et al.

EXAMINER Initial if references considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.

Sheet 4 of 7

Form P 40 1449		U.S. D partm nt of C Patent and Trademark PRIOR ART CITED BY	Office		Atty. Docket No. CS-7853 / LeA 35,95 Applicant	58	S rial No. 10.621,866		
0		Several Sheets If Nec		414.1	Christian Aiching r	t al			
AN O 9 ZOEL &					Filing Date July 17, 2003		Group 1645		
ri l				U.S. PATENT	DOCUMENTS	•			-
EXAMINED P		DOCUMENT NUM	BER	DATE	NAME	CLASS	SUBCLASS	IF AP	DATE PPRO- ATE
	AA								
	АВ							_	
	AC		·						
	AD								
	AF								
	AG								
	АН								
	AI								
	AJ							 	
	AK	<u> </u>	l FO	REIGN PATE	ENT DOCUMENTS	<u> </u>			
	DO	CUMENT NUMBER	DAT	E	COUNTRY	CLASS	SUBCLASS	TRANSL	_ATION
				_				Yes	No*
AL									<u> </u>
AM									
AN			 						<u> </u>
AO									
AP		OTHER PRICE	ART (Including Aut	hor, Title, Date, Pe	tinent Pages	Etc.)		
					3, 32, pgs. 1563-15			ence of F	ive
AR		Distinct Proteolytic	Comp Cleavir	onents in the	Pituitary Multicatal he Carboxyl Side o	ytic Proteinas	se Complex. F	roperties	s of
					6, 1990, "The <i>b</i> Alle	les of U. may	/dis. Whose C	ombination	ons
AS			nic Dev		de for Polypeptides				
 				Dec. 2000. r	gs. 1298-1302, "A	ubiquitin-bas	ed tagging sys	stem for	
AT		Controlled modula	ation of	protein stabili	ty" by J. H. Stack e	t al.			
EXAMINER					DATE CONSIDERE				
EXAMINER Initia	al if refe	rences considered, wh	ether or n	ot citation is in c	onformance with MPEP	609: Draw line t	hrough if not in co	onformance	and

Sheet 5 of 7

Flev. 7-60	T OF P	Patent and Trademark RIOR ART CITED BY	~~		CS-7853 / LeA 35,9 Applicant	58	10.621,866		
	(Use	S v ral Sheets If Nec	essary)		Christian Aichinger	et al			
140 0 9 2004 8					Filing Date July 17, 2003	Group 1645			
<u> </u>			U.S	S. PATEN	T DOCUMENTS				
EXAMINE A		DOCUMENT NUM	BER	DATE	NAME	CLASS	SUBCLASS	IF AF	DATE PRO- ATE
	AA								
	АВ								
	AC			<u> </u>					
	AD	 -						-	
	AE	 		-					·
	AF AG								
	АН				-				
	Al								
	AJ					_		1	
	AK		FORE	IGN PAT	ENT DOCUMENTS	<u> </u>			
	DOC	CUMENT NUMBER	DATE		COUNTRY	CLASS	SUBCLASS	TRANSL Yes	ATION No*
AL		·							
AM									<u> </u>
AN									
AO									
AP		OTUED DDIOD	ADT (Inc	luding Au	thor, Title, Date, Pe	rtinont Pages	Etc.)		
	— Т				1101, 1111e, Date, Pe 16, 35, pgs. 3899-3			on of the	
AR		Chymotrypic Activ	iity of the	20S Prote	asome" by R. L. St	ein et al.			
					available) 1995, pg				
AS		the APP670/671 c	louble mu	ation" by	kidney cells expres Hans-W. Klafki et a	l			rying
					9-643, "Structure o	f the proteaso	me activator l	REGa	
AT		(PA28α)" by J. Ra	ndolph Kr	owlton et	al.				
EXAMINER					DATE CONSIDERE	U			
		rences considered, who			conformance with MPEF	609: Draw line t	hrough if not in c	onformance	and

Sheet 6 of 7 Atty. Docket No. CS-7853 / L A 35,958 Form-RIO 1449 U.S. D partment of Commerce Serial No. Patent and Trademark Offic
LIST OF PRIOR ART CITED BY APPLICANT 10.621,866 Applicant (U Sev ral Sheets If Nece sary) Christian Aichinger et al 0 9 2004 Filing Dat Group July 17, 2003 1645 U.S. PATENT DOCUMENTS EXAMINATION EXAMINE FILING DATE IF APPRO-PRIATE DATE **DOCUMENT NUMBER** NAME **CLASS SUBCLASS** AA ΑB AC ΑD ΑE ΑF AG AH ΑI AJ ΑK **FOREIGN PATENT DOCUMENTS**

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSL	ATION
						Yes	No*
AL							
АМ							
AN							
AO							
AP							
 	OTHER PRIOR	ART (Inclus	ding Author Title Date Perting	ent Pages	Ftc)		

		OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)
		Chem Biol., 6, (month unavailable) 1999, pgs. 689-698, "The secondary fungal metabolite
	AR	Gliotoxin targets proteolytic activities of the proteasome" by M. Kroll et al.
		Molecular And Cellular Biology, Vol. 18, January 1998, pgs. 30-38, "Proteasome Inhibitors
	AS	Cause Induction of Heat Schock Proteins and Trehalose, Which Together Confer Thermotolerance
		in Saccharomyces cerevisiae" by Do Hee Lee et al.
		The Journal Of Biological Chemistry, Vol. 271, No. 44, Issue of November 1, 1996,
	AT	pgs. 27280-27284, "Selective Inhibitors of the Proteasome-dependent and Vacuolar Pathways of
		Protein Degradation in Saccharomyces cerevisiae" by Do Hee Lee et al.
EXA	MINER	DATE CONSIDERED

EXAMINER Initial if references considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance and not considered. Include copy of this form with next communication to applicant.

Neither English Language Equivalent nor an English Language Translation is available.

Sh et 7 of 7.

TRADESTIAL DOCUMENT NUMBER DATE NAME CLASS SUBCLASS IF	
EXAMPLE DOCUMENT NUMBER DATE NAME CLASS SUBCLASS IF FILI IF FOR THE PROPERTY OF THE PROPERTY O	
AB AC AD AE AF AG AH AI	NG DATE APPRO- PRIATE
AC AD AD AE AF AG AG AH AI	
AD	
AE	
AF AG AH AI	
AG AH AI	
AH AI	
AI .	
	···
AK	
FOREIGN PATENT DOCUMENTS	
DOCUMENT NUMBER DATE COUNTRY CLASS SUBCLASS TRAN	ISLATION No*
AL .	
AM AM	
AN AN	
AO AO	
AP A	
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.) The Journal Of Biological Chemistry, Vol. 272, No. 47, Issue of November 21, 1997,	
AR pgs. 29899-29903, "Specificities of Cell Permeant Peptidyl Inhibitors for the Proteinase Act μ-Calpain and the 20 S Proteasome" by R. L. Mellgren.	
Biochemistry, (month unavailable) 1998, pgs. 7792-7800, "Kinetic Studies of the Branched	Chain
AS Amino Acid Preferring Peptidase Activity of the 20S Proteasome: Development of a Continu Assay and Inhibition by Tripeptide Aldehydes and clasto-Lactacystin β-Lactone" by	uous
T. A. McCormack et al	
Jones R. W. et al: "Variation in Sensitivity Among Anastomosis Groups of Rhizoctonia-Sola	ani
AT To The Antibiotic Gliotoxin ^e Plant Disease, Bd. 71, Nr. 1, 1987, Seiten 34-36, XP009019179 ISSN: 0191-2917 das ganze Dokument.	9
EXAMINER DATE CONSIDERED	
EXAMINER Initial if references considered, whether or not citation is in conformance with MPEP 609: Draw line through if not in conformance considered. Include copy of this form with next communication to applicant.	